

wherein the plurality of driving units is not included within a processor.

35. (ONCE AMENDED) A computer-readable recording medium from which a program can be read by a computer to drive a plurality of driving units according to data to be processed, comprising:

supplying driving data to driving units, and

controlling other driving units using control data,

wherein the plurality of driving units is not included within a processor.

REMARKS

In the Office Action mailed on September 25, 2002, claims 1-18 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness; claims 6-18 and 22-36 were rejected under 35 U.S.C. § 102(e) as being anticipated by Bartley (U.S. Patent No. 6,219,796 B1) ("Bartley"); claims 1-3 and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by Swanberg (U.S. Patent No. 5,832,280) ("Swanberg") and were rejected under 35 U.S.C. § 102(b) as being anticipated by Holzhammer et al. (U.S. Patent No. 5,754,869) ("Holzhammer"); and claims 1-5 and 19-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Smith et al. (U.S. Patent No. 5,167,024) ("Smith"). The foregoing rejections are respectfully traversed.

Claims 1-36 are pending in the subject application, of which claims 1, 4, 6, 9, 11, 14, 17, 19, 22, 24, 27, 29, 32, and 35 are independent. Claims 1-17, 22-24, 27, 29, 32, and 35 are amended. Care has been exercised to avoid the introduction of new matter. A Version With Markings To Show Changes Made to the amended claims is included herewith.

Entry of Amendment After Final Rejection:

The Applicant respectfully asserts that the amendments presented herein require only a cursory review by the Examiner, and respectfully requests that the Examiner enter such amendments.

Rejections Under 35 U.S.C. § 112:

Claims 1-17 are amended herein. The Applicant respectfully requests that the Examiner

withdraw the rejections thereto.

Rejections Under 35 U.S.C. § 102:

Rejections Based on Bartley:

Claims 6, 9, 11, 14, 17, 24, 27, 29, 32, and 35 of the subject application (as amended herein) recite (using the language of claim 6 as an example) that the plurality of driving means “is not included within a processor.”

Claims 22 of the subject application (as amended herein) recites that “the plurality of driving units is not included in the information processing apparatus.”

Although the Examiner, in her Response to Arguments on page 13 of the Office Action, stated that Bartley discloses that the functional units may be internal or external to the central processing unit, the Examiner ignores the distinction that, in the present invention, the driving means/units are not included within the processor, but may be included within the central processing unit. Bartley is restricted to the functional units being contained within the processor, even though the processor may be internal or external to a CPU (Bartley, col. 6, lines 47-52).

Therefore, claims 6, 9, 11, 14, 17, 22, 24, 27, 29, 32, and 35 patentably distinguish over the Bartley.

Rejections Based on Swanberg:

Swanberg discusses a power management controller coupled to one or more power-managed devices (Swanberg, Abstract).

Claims 1 and 19 (as amended herein) recite (using the language of claim 1 as an example) that the plurality of driving means “is not included in the information processing apparatus.”

Swanberg does not disclose or suggest that the plurality of driving means/units is not included in the information processing apparatus. The Examiner cites column 5, lines 59-60 of Swanberg as disclosing that the controllers control driving means/units. That sentence discusses display controller 98 including electronic components required to generate a video signal that is sent to display 96. Even if someone skilled in the art would understand that

sentence to disclose that display controller 98 controls a driving means/unit, they would only read it to discuss such driving means/unit being included within the information processing apparatus. Swanberg does not disclose or suggest otherwise, and the Examiner does not even argue as such.

Therefore, it is clear that claims 1 and 19 patentably distinguish over Swanberg.

Rejections Based on Holzhammer:

Holzhammer discusses a power management system (Holzhammer, col. 1, lines 10-12).

Claims 1 and 19 (as amended herein) recite (using the language of claim 1 as an example) that the plurality of driving means “is not included in the information processing apparatus.”

Holzhammer does not disclose or suggest that the plurality of driving means/units is not included in the information processing apparatus. Specifically, in Holzhammer, each of a plurality of power management (PM) handlers 17 controls the power consumption of its own one of a plurality of device drivers 15 (Holzhammer, col. 3, lines 48-58). However, as illustrated in Figure 1 of Holzhammer, each PM handler 17 is physically located within its device driver 15 (Holzhammer, Fig. 1; col. 3, lines 44-46). Both the plurality of PM handlers 17 and the plurality of device drivers 15 are discussed as being located within the CPU in Holzhammer, and Holzhammer does not disclose or suggest the device drivers 15 being outside of the CPU. In fact, the Examiner does not even assert that the plurality of driving means/units is not included in the information processing apparatus.

Therefore, claims 1 and 19 patentably distinguish over Holzhammer.

Rejections Based on Smith:

Smith discusses a power manager within a portable laptop computer (Smith, Abstract).

Claims 1, 4, and 19 of the subject application (as amended herein) recite “a plurality of control units.”

Smith does not disclose or suggest a plurality of control units. The device drivers in Smith are responsible for powering particular peripheral devices on and off (Smith, col. 9, lines 50-52). Smith discusses a single power manager that controls the device drivers (Smith, col. 3,

lines 24-27).

Further, claims 1, 4, and 19 of the subject application (as amended herein) recite (using the language of claim 1 as an example) that the plurality of driving means “is not included in the information processing apparatus.”

Smith is implemented in a laptop computer (Smith, col. 3, lines 14-15). Therefore, the device drivers controlled by Smith’s power manager are included within the laptop computer. Clearly, Smith does not disclose or suggest that the driving means/units are not included in the information processing apparatus.

Therefore, claims 1, 4, and 19 patentably distinguish over Smith.

Dependent claims:

In addition to being allowable based on their dependency from one of allowable claims 1, 4, 6, 9, 11, 14, 17, 19, 22, 24, 27, 29, 32, and 35, claims 2, 3, 5, 7, 8, 10, 12, 13, 15, 16, 18, 20, 21, 23, 25, 26, 28, 30, 31, 33, 34, and 36 of the subject application (as amended herein) recite patentably distinguishing features of their own. For example, claim 3 (as amended herein) recites that “each of said plurality of control units supplies power to the corresponding one of said plurality of driving means when the corresponding one of the plurality of driving means can process said data to be processed and stops supplying power to the corresponding one of said plurality of driving means when the corresponding one of the plurality of driving means cannot process said data to be processed.” The cited references, taken alone or in combination, do not disclose or suggest the same.

Withdrawal of the foregoing rejections is respectfully requested.

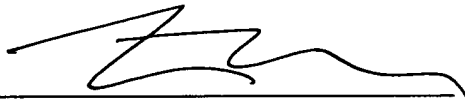
There being no further objections or rejections, it is submitted that the application is in condition for allowance, which action is courteously requested. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned

to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND claims 1-17, 22-24, 27, 29, 32, and 35. The remaining claims are reprinted, as a convenience to the Examiner, as they presently stand before the U.S. Patent and Trademark Office.

1. (TWICE AMENDED) An information processing apparatus to drive a plurality of driving means according to data to be processed, the information processing apparatus comprising:

a detection unit to detect a type of the data to be processed; and

a plurality of control units, each of which to control a corresponding one of the plurality of driving means according to said type of the data to be processed, wherein the plurality of driving means is not included in the information processing apparatus.

2. (ONCE AMENDED) The information processing apparatus as claimed in claim 1, wherein each of said plurality of control units controls a power source which supplies power to the corresponding one of said plurality of driving means.

3. (ONCE AMENDED) The information processing apparatus as claimed in claim 2, wherein each of said plurality of control units supplies power to [each] the corresponding one of said plurality of driving means [that] when the corresponding one of the plurality of driving means can process said data to be processed and stops supplying power to [each] the corresponding one of said plurality of driving means [that] when the corresponding one of the plurality of driving means cannot process said data to be processed.

4. (TWICE AMENDED) An information processing apparatus to drive a plurality of driving means according to data to be processed, the information processing apparatus comprising:

a plurality of control units, each of which to control a corresponding one of the plurality of driving means according to control data added to said data to be processed, wherein the plurality of driving means is not included in the information processing apparatus.

5. (ONCE AMENDED) The information processing apparatus as claimed in claim 4,

wherein each of said plurality of control units controls a power source which supplies power to the corresponding one of said plurality of driving means.

6. (TWICE AMENDED) A power control method which controls power supplied to a plurality of [external] driving means to be supplied with data to be processed, the power control method comprising [the steps of]:

[(a)] detecting a type of the data to be processed; and

[(b)] controlling each of said plurality of [external] driving means according to said type of the data to be processed,

wherein the plurality of driving means is not included within a processor.

7. (TWICE AMENDED) The power control method as claimed in claim 6, wherein said [step (b)] controlling each of said plurality of driving means controls a power source which supplies the power to said plurality of [external] driving means.

8. (TWICE AMENDED) The power control method as claimed in claim 7, wherein said [step (b)] controlling each of said plurality of driving means supplies power to each of said plurality of [external] driving means that can process said data to be processed, and stops supplying power to each of said plurality of [external] driving means that cannot process said data to be processed.

9. (TWICE AMENDED) A power control method which controls power supplied to a plurality of [external] driving means to be supplied with data to be processed, the power control method comprising:

[a step of] controlling each of said plurality of [external] driving means according to control data added to said data to be processed,

wherein the plurality of driving means is not included within a processor.

10. (TWICE AMENDED) The power control method as claimed in claim 9, wherein said [step] controlling each of said plurality of driving means controls a power source which supplies the power to said plurality of [external] driving means.

11. (TWICE AMENDED) A computer readable recording medium from which a

program can be read by a computer which drives a plurality of [external] driving means according to data to be processed, the computer readable recording medium comprising:

the program comprising:

a detection procedure for detecting a type of the data to be processed; and

a control procedure for controlling each of said plurality of [external] driving means according to said type of the data to be processed,

wherein the plurality of driving means is not included within a processor.

12. (TWICE AMENDED) The computer readable recording medium as claimed in claim 11, wherein said control procedure controls a power source which supplies power to said plurality of [external] driving means.

13. (TWICE AMENDED) The computer readable recording medium as claimed in claim 11, wherein said control procedure supplies power to each of said plurality of [external] driving means that can process said data to be processed and stops supplying the power to each of said plurality of [external] driving means which can not process said data to be processed.

14. (TWICE AMENDED) The computer readable recording medium from which a program can be read by a computer which drives a plurality of [external] driving means according to data to be processed, the computer readable recording medium comprising:

the program comprising:

a control procedure for controlling each of said plurality of [external] driving means according to control data added to said data to be processed,

wherein the plurality of driving means is not included within a processor.

15. (TWICE AMENDED) The computer readable recording medium as claimed in claim 14, wherein said control procedure controls a power source which supplies power to said plurality of [external] driving means.

16. (TWICE AMENDED) The computer readable recording medium as claimed in claim 14, wherein said control procedure supplies power to each of said plurality of [external] driving means that can process said data to be processed and stops supplying the power to

each of said plurality of [external] driving means which cannot process said data to be processed.

17. (TWICE AMENDED) A computer readable recording medium comprising:
data comprising:

driving data to be supplied to [external] driving means; and
control data used to control other [external] driving means,

wherein the plurality of driving means is not included within a processor.

18. (ONCE AMENDED) The computer readable recording medium as claimed in claim 17, wherein said control data is recorded just before said driving data.

19. (UNAMENDED) An information processing apparatus to drive a plurality of driving units according to data to be processed, comprising:

a detection unit to detect a type of the data to be processed; and

a plurality of control units, each of which to control a corresponding driving unit according to the type of the data to be processed, wherein the plurality of driving units is not included in the information processing apparatus.

20. (UNAMENDED) The information processing apparatus of claim 19, wherein each of the plurality of control units controls a power source which supplies power to its corresponding driving unit.

21. (UNAMENDED) The information processing apparatus of claim 20, wherein each of the plurality of control units supplies power to its corresponding driving unit if the driving unit can process the data to be processed, and wherein each of the plurality of control units stops supplying power to its corresponding driving unit if the driving unit cannot process the data to be processed.

22. (ONCE AMENDED) An information processing apparatus to drive a plurality of driving units according to data to be processed, comprising:

a plurality of control units, each of which to control a corresponding one of the plurality of driving units according to control data added to said data to be processed, wherein the plurality

of driving units is not included in the information processing apparatus.

23. (ONCE AMENDED) The information processing apparatus of claim 22, wherein each of said plurality of control units controls a power source which supplies power to the corresponding one of said plurality of driving [means] units.

24. (ONCE AMENDED) A power control method to control power supplied to a plurality of external driving units to be supplied with data to be processed, comprising:
detecting a type of the data to be processed; and
controlling each of the plurality of external driving units according to the type of the data to be processed,
wherein the plurality of driving units is not included within a processor.

25. (UNAMENDED) The power control method of claim 24, further comprising controlling a power source that supplies the power to the plurality of driving units.

26. (UNAMENDED) The power control method of claim 25, further comprising supplying power to each of the plurality of driving units that can process the data to be processed, and stopping a supply of power to each of the plurality of driving units that cannot process the data to be processed.

27. (ONCE AMENDED) A power control method to control power supplied to a plurality of driving units to be supplied with data to be processed, comprising:
controlling each of the plurality of driving units according to control data added to the data to be processed,
wherein the plurality of driving units is not included within a processor.

28. (UNAMENDED) The power control method of claim 27, further comprising controlling a power source that supplies the power to the plurality of driving units.

29. (ONCE AMENDED) A computer readable recording medium from which a program can be read by a computer to drive a plurality of driving units according to data to be processed, comprising:

detecting a type of the data to be processed; and
controlling each of the plurality of driving units according to the type of the data to be processed,

wherein the plurality of driving units is not included within a processor.

30. (UNAMENDED) The computer readable recording medium of claim 29, further comprising controlling a power source that supplies power to the plurality of driving units.

31. (UNAMENDED) The computer readable recording medium of claim 29, further comprising supplying power to each of the plurality of driving units that can process said data to be processed; and stopping a supply of power to each of the plurality of driving units that cannot process said data to be processed.

32. (ONCE AMENDED) A computer readable recording medium from which a program can be read by a computer to drive a plurality of driving units according to data to be processed, comprising:

controlling each of the plurality of driving units according to control data added to the data to be processed,

wherein the plurality of driving units is not included within a processor.

33. (UNAMENDED) The computer readable recording medium of claim 32, further comprising controlling a power source that supplies power to the plurality of driving units.

34. (UNAMENDED) The computer readable recording medium of claim 32, further comprising supplying power to each of the plurality of driving units that can process said data to be processed; and stopping a supply of power to each of the plurality of driving units that cannot process the data to be processed.

35. (ONCE AMENDED) A computer readable recording medium from which a program can be read by a computer to drive a plurality of driving units according to data to be processed, comprising:

supplying driving data to driving units; and

controlling other driving units using control data,

wherein the plurality of driving units is not included within a processor.

36. (UNAMENDED) The computer readable recording medium of claim 35, wherein the control data is recorded just before the driving data.